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The relationship of prosthesis usage, phantom pain and psychiatric symptoms in male traumatic limb amputees

D. Durmus^a, I. Safaz^b, E. Adiguzel^{b,*}, A. Uran^b, G. Sarisoy^c, A.S. Göktepe^b, A.K. Tan^b

^a *Department of Physical Medicine and Rehabilitation, Medical Faculty, Ondokuz Mayıs University, Samsun, Turkey*

^b *Gulhane Military Medical Academy, Department of PMR, Turkish Armed Forces Rehabilitation Center, Ankara, Turkey*

^c *Department of Psychiatry, Medical Faculty, Ondokuz Mayıs University, Samsun, Turkey*

*Corresponding author.

Keywords: Amputee; Prosthesis; Phantom pain; Psychiatric symptoms

Background.– Aim of this clinical trial was to evaluate the relationship of prosthesis usage, phantom pain and psychiatric symptoms in male traumatic limb amputees (LAs).

Methods.– Fifty-one LAs patients (group 1) and 53 healthy controls (group 2) were included. Phantom pain was measured visual analog scale (VAS). Psychiatric symptoms were measured using the Symptom Checklist-90-R, Beck Depression Inventory, Pittsburgh Sleep Quality Index, Rosenberg Self-Esteem Scale and State-Trait Anxiety Inventory.

Results.– The intergroup comparison showed significant differences in phobic anxiety ($P=0.003$), state anxiety ($P=0.0001$), trait anxiety ($P=0.001$), and sleep disturbance ($P=0.002$). The differences were statistically significant in group 1 compared with group 2. There were significant negative correlations between duration of amputation, duration of prosthesis usage, duration of daily prosthesis usage, and satisfaction with prosthesis questionnaire scores and psychiatric symptoms. There were no correlations between phantom pain and psychiatric measurements.

Discussion.– In our study, correlations has been found between duration of prosthesis usage, duration of daily prosthesis usage and satisfaction with prosthesis and lower psychiatric symptoms (somatization, obsessive-compulsive symptoms, interpersonal sensitivity, anger hostility, phobic anxiety and psychoticism). Duration of prosthesis usage and satisfaction with prosthesis may be important for rehabilitation of psychiatric symptoms. There is no relationship between phantom pain and psychiatric measurements in LAs patients.

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Some features of rehabilitation for patients with chronic bronchial diseases in combination of chest deformation caused by spine disorders

M. Kyrkychenko

Kharkov national medical university, Kharkov

Keywords: Chronic bronchial diseases; Chest deformation; Kinezotherapy

Background.– Clinical problem includes thorax deformation because of different disturbances of spine. It results in pathologic changing of chest volume and then lungs volumes in patients with chronic bronchial diseases (CBD) [1].

Objective.– Determination of new approaches to breath restorative therapy for patients with CBD.

Methods.– Rehabilitation programme included posture correction, breathing kinezotherapy, procedures of therapeutic physical exercises. Yoga-therapy, fit-ball gymnastics, sound exercises, relaxation exercises, water exercises, methods of massage. Rehabilitation course was carried out daily during 3.5 hours as the cycle of procedures.

and chest deformation were more expressed than in patients without vertebral pathology. These differences were interpreted in dynamic indexes of respiration volumes. The worked out tactics of restorative methods improved clinical state of these patients.

Discussion.– Physical exercises stimulate the respiration and lungs gas exchange eliminate discoordination of respiratory act, prevent development of chest deformation.

Conclusion.– The restoration of respiratory functions depends on correction of deformed volumes of chest.

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Interface pressure measurement for lumbar belt evaluation

R. Bonnaire^{a,*}, M. Verhaeghe^b, J. Molimard^a, P. Calmels^c, R. Convert^d

^a *École des Mines de Saint-Étienne, Saint-Étienne, France*

^b *Université Technologique de Compiègne, Compiègne, France*

^c *CHU Bellevue, Saint-Étienne, France*

^d *Thuasne*

*Corresponding author.

Keywords: Pressure mapping system; Lumbar belt; Metrology; Low back pain

Objective.– Lumbar belt is a medical device used to prevent and treat low back pain, for which the main mechanical effect is the pressure applied on the trunk. Objective is to evaluate four “FSA” sensors designed to measure this pressure.

Methods.– Two types of tests have been considered: classical tests of metrology (linearity, hysteresis, repeatability, reproducibility and drift) and specific tests to the application (curvature, surface condition and mapping system superposition) [1].

Results.– Linear regression coefficient is between 0.86 and 0.98; hysteresis between 6.29% and 9.41%. Measurements are repeatable. Location, time and operator, measurement surface condition and mapping system superposition have influence on the results. Stable measure is obtained after 800 seconds. Measurement stays suitable on curved surface.

Discussion.– Tested sensor is acceptable. Nevertheless, take into account recommendations before using it: measurement must be performed in the same place, in a short time, with the same operator, between the same kind of surfaces; calibration must be adapted to avoid the sensor drift; overlap pressure mapping systems must be avoid.

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Management of quadruple amputee in a Tunisian rehabilitation service: Results and challenges

E. Toulgui, K. Maaref^{*}, S. Mtawaa, M. Faiez, A. Zaoui, F. Khachnaoui

CHU Sahloul, Sousse, Tunisia

*Corresponding author.

Keywords: Quadruple amputee; Rehabilitation; Prosthesis

Background.– Four limbs major amputation “quadruple amputation” is rare. It often occurs after electrical burns. We report the case of a four limb amputated child followed up in a PMR department.

Case report.– K.S. was victim at the age of 13 of an electric shock. It caused damage as a third degree burn of the four limbs complicated by compartment